

## **RETAINING END OF SHOELACE**

### **BACKGROUND OF THE INVENTION**

The present invention is related to a retaining end of a shoelace, including a shoelace, and a retaining end integrally molded by rubber at both ends of the shoelace thereof respectively. The rubber molding the retaining end thereof can also be eco-friendly silica-gel, or mixed with other materials such as gold dust, pearl white, aromatics, or thermo-indicating agent to achieve more colorful and eye-catching effects of the retaining end thereof in display. Besides, the retaining end is securely coated outside a tying section disposed at both ends of the shoelace thereof respectively without coming off there-from easily to attain the best using condition, facilitating the massive production thereof and boosting its competitive power in the market.

Please refer to Fig. 1. A conventional retaining end of a shoelace is made up of a shoelace 10 compressed into a tying section 11 of smaller diameter at both ends thereof respectively, and a rubber plate 20 bundled around the tying section 11 to form a retaining end of the shoelace 10 thereof.

There are some drawbacks to such conventional retaining end of a shoelace. First, the rubber plate 20, easily oxygenized due to exposure to sunlight in a long time, may break or come off from the tying section 11 thereof, marring its overall beauty in display as well as reducing its using life. Second, the tying section 11 of the shoelace 10 and the rubber plate 20 are separately produced before further processed in assembly. Thus, due to its tedious and time-consuming process in production and assembly, the conventional retaining end of the shoelace is difficult to be produced on a massive scale.

Please refer to Fig. 2. A second conventional retaining end of a shoelace has a shoelace 10' compressed into a tying section 11' at both ends thereof respectively which is coated with a layer of adhesive agent A before a plastic retaining end 20' is joined in sleeve registration with the tying section 11' thereof for location.

There are some drawbacks to the second conventional retaining end of a shoelace. First, the plastic retaining end 20' is easily oxygenized under long time of usage, resulting in breakage or coming off from the tying section 11' thereof. Thus, it's easily marred in overall display and quickly reduced in its using life. Second, the tying section 11' of the shoelace 10' and the plastic retaining end 20' are separately produced before further processed in assembly. Besides, the adhesive agent A must first be coated onto the tying section 11' before the plastic retaining end 20' is applied thereto. Thus, tedious and time-consuming in processing, the second conventional retaining end of the shoelace is also difficult to be produced on a massive scale.

Please refer to Fig. 3. A third conventional retaining end of a shoelace comprises a shoelace 10'' compressed into a tying section 11'' of smaller diameter at both ends thereof respectively to which a layer of adhesive agent A is coated before a metal retaining end 20'' is joined in sleeve engagement thereto.

There are some disadvantages to the third conventional retaining end of a shoelace. First, small hairy edges are produced in the metal retaining end 20'', which may easily hurt the fingers of a user in tying up the shoelace 10'' thereof or hook and destroy the socks of the user. Second, the tying section 11'' of the shoelace 10'' and the metal retaining end 20'' are separately produced before further processed in assembly. Besides, the adhesive agent A must first be coated onto the tying section 11'' before the metal retaining end 20'' is applied

thereto. Thus, it's too tedious and time-consuming in processing to be produced on a massive scale.

### **SUMMARY OF THE PRESENT INVENTION**

It is, therefore, the primary purpose of the present invention to provide a retaining end of a shoelace, including a shoelace, and a retaining end integrally molded via rubber injected into an upper and a lower molds covering a tying section disposed at both ends of the shoelace thereof respectively, securely coating the retaining end outside the tying section of the shoelace without coming off there-from easily to attain the best using condition.

It is, therefore, the secondary purpose of the present invention to provide a retaining end of a shoelace wherein the retaining end is integrally coated outside the tying section of the shoelace, facilitating the production thereof on a massive scale.

It is, therefore, the third purpose of the present invention to provide a retaining end of a shoelace wherein the rubber molding the retaining end thereof can also be eco-friendly silica-gel, or mixed with other materials such as gold dust, pearl white, aromatics, or thermo-indicating agent to achieve more colorful and eye-catching effects of the retaining end thereof in display to boost its competitive power in the market.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

Fig. 1 is a perspective exploded view of a conventional retaining end of a shoelace.

**Fig. 2 is a perspective exploded view of another conventional retaining end of a shoelace.**

**Fig. 3 is a perspective exploded view of a third conventional retaining end of a shoelace.**

**Fig. 4 is perspective view of the present invention.**

**Fig. 5 is an enlarged sectional view of the present invention.**

### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Please refer to Figs. 4, 5. The present invention is related to a retaining end of a shoelace, comprising a shoelace 30, and a retaining end 40 integrally molded at both ends of the shoelace 30 thereof respectively. Both ends of the shoelace 30 are respectively disposed a tying section 31 which is located into an upper and a lower molds communicating with piping for rubber 40 to be injected therein. The rubber 41 coating the tying section 31 of the shoelace 30 therein is properly modified to form the integrally molded retaining end 40 thereof. The rubber 41 can also be eco-friendly silica-gel or mixed with other materials such as gold dust, pearl white, aromatics, or thermo-indicating agent to achieve more colorful and eye-catching effects of the retaining end 40 in display to boost its competitive power in the market. Thus, integrally molded by the rubber 41, the retaining end 40 is securely coated outside the tying section 31 of the shoelace 30 without coming off there-from easily, attaining the best using condition and facilitating the production thereof on a massive scale.